

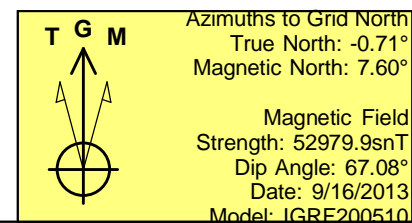
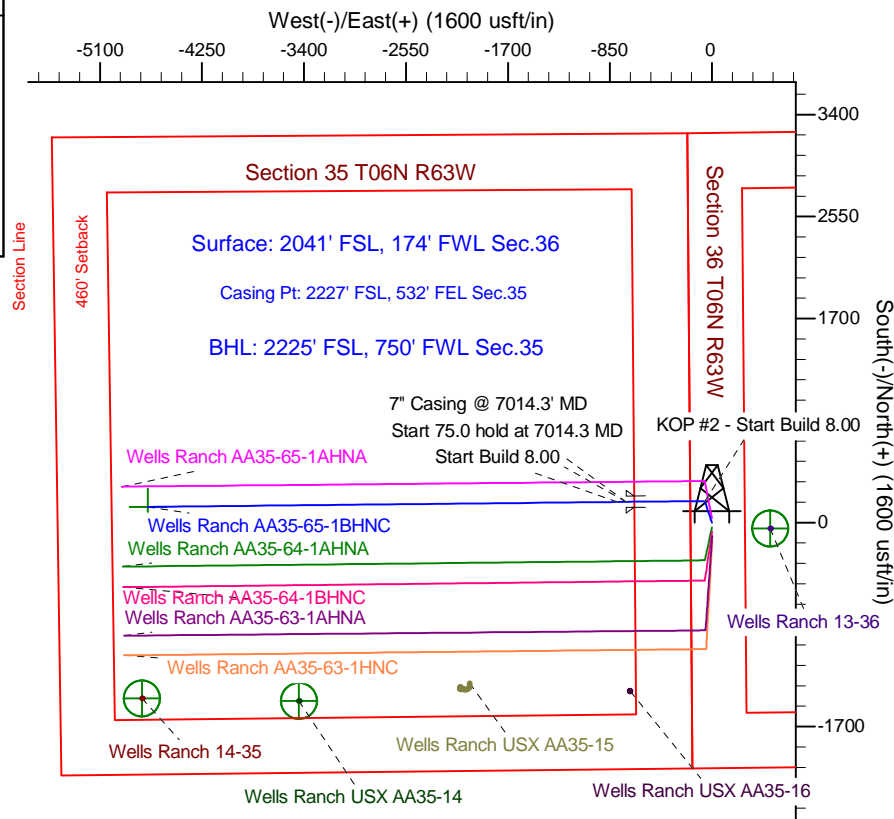
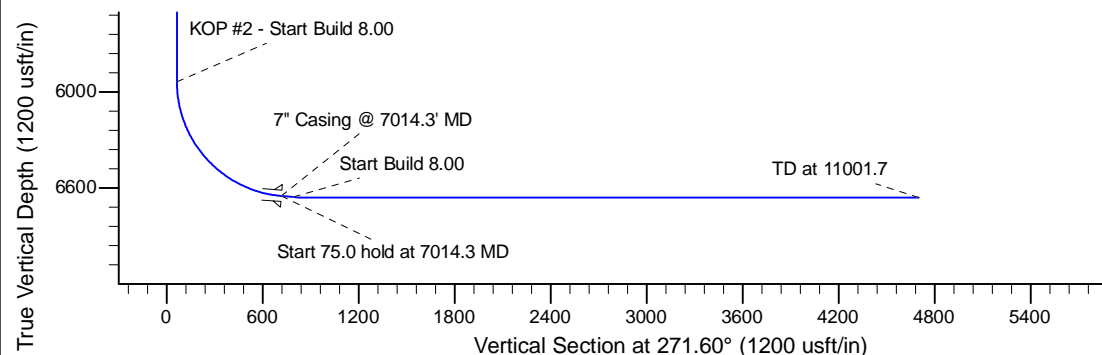
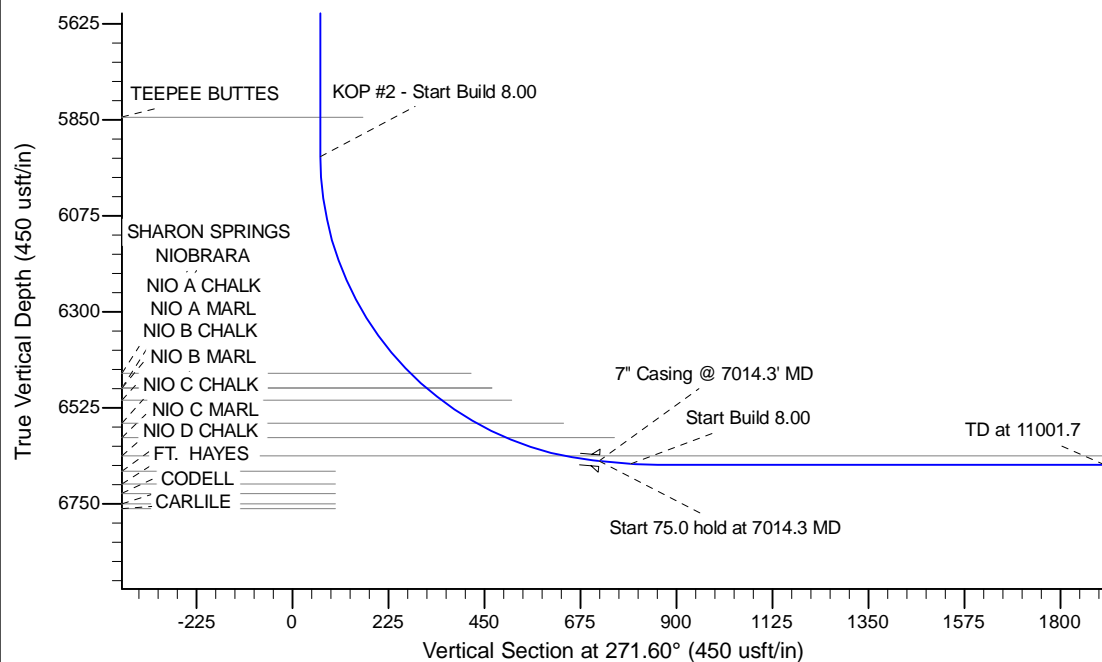
Project: Wattenberg Field  
Site: AA (Sec.36-T06N-R63W) Weld County, CO  
Well: Wells Ranch AA35-65-1BHNC  
Wellbore: Wellbore #1  
Design: APD - Rev 0

# Northern Region Drilling - Working

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone  
System Datum: Mean Sea Level

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	2101.6	12.03	341.57	2097.2	59.7	-19.9	2.00	341.57	21.6	
4	2407.9	12.03	341.57	2396.8	120.3	-40.1	0.00	0.00	43.4	
5	3009.6	0.00	0.00	2994.0	180.0	-60.0	2.00	180.00	65.0	
6	5951.8	0.00	0.00	5936.3	180.0	-60.0	0.00	0.00	65.0	
7	7014.3	85.00	269.40	6649.7	173.1	-713.7	8.00	269.40	718.3	
8	7089.3	85.00	269.40	6656.3	172.4	-788.5	0.00	0.00	793.0	
9	7151.8	90.00	269.40	6659.0	171.7	-850.9	8.00	0.00	855.3	
10	11001.7	90.00	269.40	6659.0	131.3	-4700.5	0.00	0.00	4702.4	Wells Ranch AA35-65-1BHNC BHL 2225'FSL, 750'FWL



WELL DETAILS: Wells Ranch AA35-65-1BHNC				
Ground Level: 4774.0				
0.0	0.0	Northing	Easting	Latitude
		1405499.85	3307809.30	40.441230
				Longitude
				-104.394100
Plan: APD - Rev 0 (Wells Ranch AA35-65-1BHNC/Wellbore #1)				
Created By: Shailey Jewell		Date: 13:07, September 16 2013		
Checked: _____		Date: _____		
Reviewed: _____		Date: _____		
Approved: _____		Date: _____		

# **Northern Region Drilling - Working**

**Wattenberg Field**

**AA (06N-63W)**

**Wells Ranch AA35-65-1BHNC**

**Wellbore #1**

**Plan: APD - Rev 0**

## **Standard Planning Report**

**16 September, 2013**

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

<b>Project</b>	Wattenberg Field, Weld County CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		AA (06N-63W)			
Site Position:		Northing:	1,427,844.88 usft	Latitude:	40.502740
From:	Lat/Long	Easting:	3,302,558.01 usft	Longitude:	-104.411980
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.70 °

Well	Wells Ranch AA35-65-1BHNC					
Well Position	+N/-S	-22,345.8 usft	Northing:	1,405,499.85 usft	Latitude:	40.441230
	+E/-W	5,251.5 usft	Easting:	3,307,809.31 usft	Longitude:	-104.394100
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,774.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	9/16/2013	8.31	67.08	52,980

<b>Design</b>	APD - Rev 0			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	271.60

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,101.6	12.03	341.57	2,097.2	59.7	-19.9	2.00	2.00	0.00	341.57	
2,407.9	12.03	341.57	2,396.8	120.3	-40.1	0.00	0.00	0.00	0.00	
3,009.6	0.00	0.00	2,994.0	180.0	-60.0	2.00	-2.00	0.00	180.00	
5,951.8	0.00	0.00	5,936.3	180.0	-60.0	0.00	0.00	0.00	0.00	
7,014.3	85.00	269.40	6,649.7	173.1	-713.7	8.00	8.00	0.00	269.40	
7,089.3	85.00	269.40	6,656.3	172.4	-788.5	0.00	0.00	0.00	0.00	
7,151.8	90.00	269.40	6,659.0	171.7	-850.9	8.00	8.00	0.00	0.00	
11,001.7	90.00	269.40	6,659.0	131.3	-4,700.5	0.00	0.00	0.00	0.00	Wells Ranch AA35-65

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
50.0	0.00	0.00	50.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
550.0	0.00	0.00	550.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
850.0	0.00	0.00	850.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,250.0	0.00	0.00	1,250.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,350.0	0.00	0.00	1,350.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,450.0	0.00	0.00	1,450.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Start Build 2.00</b>									
1,550.0	1.00	341.57	1,550.0	0.4	-0.1	0.1	2.00	2.00	0.00
1,600.0	2.00	341.57	1,600.0	1.7	-0.6	0.6	2.00	2.00	0.00
1,650.0	3.00	341.57	1,649.9	3.7	-1.2	1.3	2.00	2.00	0.00
1,700.0	4.00	341.57	1,699.8	6.6	-2.2	2.4	2.00	2.00	0.00
1,750.0	5.00	341.57	1,749.7	10.3	-3.4	3.7	2.00	2.00	0.00
1,800.0	6.00	341.57	1,799.5	14.9	-5.0	5.4	2.00	2.00	0.00
1,850.0	7.00	341.57	1,849.1	20.3	-6.8	7.3	2.00	2.00	0.00
1,900.0	8.00	341.57	1,898.7	26.4	-8.8	9.6	2.00	2.00	0.00
1,950.0	9.00	341.57	1,948.2	33.5	-11.2	12.1	2.00	2.00	0.00
2,000.0	10.00	341.57	1,997.5	41.3	-13.8	14.9	2.00	2.00	0.00
2,050.0	11.00	341.57	2,046.6	49.9	-16.6	18.0	2.00	2.00	0.00
2,100.0	12.00	341.57	2,095.6	59.4	-19.8	21.4	2.00	2.00	0.00
2,101.6	12.03	341.57	2,097.2	59.7	-19.9	21.6	2.00	2.00	0.00
2,150.0	12.03	341.57	2,144.5	69.3	-23.1	25.0	0.00	0.00	0.00
2,200.0	12.03	341.57	2,193.4	79.2	-26.4	28.6	0.00	0.00	0.00
2,250.0	12.03	341.57	2,242.3	89.1	-29.7	32.2	0.00	0.00	0.00
2,300.0	12.03	341.57	2,291.2	98.9	-33.0	35.7	0.00	0.00	0.00
2,350.0	12.03	341.57	2,340.1	108.8	-36.3	39.3	0.00	0.00	0.00
2,400.0	12.03	341.57	2,389.0	118.7	-39.6	42.9	0.00	0.00	0.00
2,407.9	12.03	341.57	2,396.8	120.3	-40.1	43.4	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
2,450.0	11.19	341.57	2,438.0	128.3	-42.8	46.3	2.00	-2.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,476.5	10.66	341.57	2,464.0	133.1	-44.4	48.1	2.00	-2.00	0.00
<b>PIERRE</b>									
2,500.0	10.19	341.57	2,487.1	137.1	-45.7	49.5	2.00	-2.00	0.00
2,550.0	9.19	341.57	2,536.4	145.1	-48.4	52.4	2.00	-2.00	0.00
2,600.0	8.19	341.57	2,585.8	152.3	-50.8	55.0	2.00	-2.00	0.00
2,650.0	7.19	341.57	2,635.4	158.6	-52.9	57.3	2.00	-2.00	0.00
2,700.0	6.19	341.57	2,685.0	164.1	-54.7	59.3	2.00	-2.00	0.00
2,750.0	5.19	341.57	2,734.8	168.9	-56.3	61.0	2.00	-2.00	0.00
2,800.0	4.19	341.57	2,784.6	172.7	-57.6	62.4	2.00	-2.00	0.00
2,850.0	3.19	341.57	2,834.5	175.8	-58.6	63.5	2.00	-2.00	0.00
2,900.0	2.19	341.57	2,884.5	178.0	-59.3	64.3	2.00	-2.00	0.00
2,950.0	1.19	341.57	2,934.4	179.4	-59.8	64.8	2.00	-2.00	0.00
3,000.0	0.19	341.57	2,984.4	180.0	-60.0	65.0	2.00	-2.00	0.00
3,009.6	0.00	0.00	2,994.0	180.0	-60.0	65.0	2.00	-2.00	0.00
3,050.0	0.00	0.00	3,034.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,084.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,150.0	0.00	0.00	3,134.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,184.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,250.0	0.00	0.00	3,234.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,284.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,350.0	0.00	0.00	3,334.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,384.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,450.0	0.00	0.00	3,434.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,484.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,550.0	0.00	0.00	3,534.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,584.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,608.6	0.00	0.00	3,593.0	180.0	-60.0	65.0	0.00	0.00	0.00
<b>PARKMAN</b>									
3,650.0	0.00	0.00	3,634.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,684.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,750.0	0.00	0.00	3,734.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,784.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,850.0	0.00	0.00	3,834.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,884.4	180.0	-60.0	65.0	0.00	0.00	0.00
3,950.0	0.00	0.00	3,934.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,000.0	0.00	0.00	3,984.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,050.0	0.00	0.00	4,034.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,084.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,150.0	0.00	0.00	4,134.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,184.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,250.0	0.00	0.00	4,234.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,284.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,319.6	0.00	0.00	4,304.0	180.0	-60.0	65.0	0.00	0.00	0.00
<b>SUSSEX</b>									
4,350.0	0.00	0.00	4,334.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,384.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,450.0	0.00	0.00	4,434.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,484.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,550.0	0.00	0.00	4,534.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,584.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,650.0	0.00	0.00	4,634.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,684.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,750.0	0.00	0.00	4,734.4	180.0	-60.0	65.0	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	0.00	0.00	4,784.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,850.0	0.00	0.00	4,834.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,884.4	180.0	-60.0	65.0	0.00	0.00	0.00
4,911.6	0.00	0.00	4,896.0	180.0	-60.0	65.0	0.00	0.00	0.00
<b>SHANNON</b>									
4,950.0	0.00	0.00	4,934.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,984.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,050.0	0.00	0.00	5,034.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,084.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,150.0	0.00	0.00	5,134.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,184.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,250.0	0.00	0.00	5,234.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,284.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,350.0	0.00	0.00	5,334.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,384.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,450.0	0.00	0.00	5,434.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,484.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,550.0	0.00	0.00	5,534.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,584.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,650.0	0.00	0.00	5,634.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,684.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,750.0	0.00	0.00	5,734.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,784.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,850.0	0.00	0.00	5,834.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,859.6	0.00	0.00	5,844.0	180.0	-60.0	65.0	0.00	0.00	0.00
<b>TEEPEE BUTTES</b>									
5,900.0	0.00	0.00	5,884.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,950.0	0.00	0.00	5,934.4	180.0	-60.0	65.0	0.00	0.00	0.00
5,951.8	0.00	0.00	5,936.2	180.0	-60.0	65.0	0.00	0.00	0.00
<b>KOP #2 - Start Build 8.00</b>									
6,000.0	3.85	269.40	5,984.4	180.0	-61.6	66.6	8.00	8.00	0.00
6,050.0	7.85	269.40	6,034.1	179.9	-66.7	71.7	8.00	8.00	0.00
6,100.0	11.85	269.40	6,083.4	179.8	-75.3	80.3	8.00	8.00	0.00
6,150.0	15.85	269.40	6,131.9	179.7	-87.2	92.2	8.00	8.00	0.00
6,200.0	19.85	269.40	6,179.5	179.6	-102.6	107.5	8.00	8.00	0.00
6,250.0	23.85	269.40	6,225.9	179.4	-121.2	126.1	8.00	8.00	0.00
6,300.0	27.85	269.40	6,270.9	179.1	-143.0	147.9	8.00	8.00	0.00
6,350.0	31.85	269.40	6,314.2	178.9	-167.9	172.8	8.00	8.00	0.00
6,400.0	35.85	269.40	6,355.8	178.6	-195.7	200.6	8.00	8.00	0.00
6,450.0	39.85	269.40	6,395.2	178.3	-226.4	231.3	8.00	8.00	0.00
6,500.0	43.85	269.40	6,432.5	177.9	-259.7	264.6	8.00	8.00	0.00
6,516.2	45.15	269.40	6,444.0	177.8	-271.1	275.9	8.00	8.00	0.00
<b>SHARON SPRINGS</b>									
6,550.0	47.85	269.40	6,467.3	177.5	-295.6	300.4	8.00	8.00	0.00
6,567.7	49.27	269.40	6,479.0	177.4	-308.9	313.7	8.00	8.00	0.00
<b>NIOBRARA - NIO A CHALK</b>									
6,600.0	51.85	269.40	6,499.5	177.1	-333.8	338.6	8.00	8.00	0.00
6,612.3	52.83	269.40	6,507.0	177.0	-343.5	348.3	8.00	8.00	0.00
<b>NIO A MARL</b>									
6,636.5	54.77	269.40	6,521.3	176.8	-363.0	367.8	8.00	8.00	0.00
<b>Wells Ranch 13-36</b>									
6,650.0	55.85	269.40	6,529.0	176.7	-374.2	379.0	8.00	8.00	0.00
6,700.0	59.85	269.40	6,555.6	176.3	-416.5	421.3	8.00	8.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,710.9	60.73	269.40	6,561.0	176.2	-426.0	430.7	8.00	8.00	0.00
<b>NIO B CHALK</b>									
6,750.0	63.85	269.40	6,579.2	175.8	-460.6	465.3	8.00	8.00	0.00
6,788.0	66.89	269.40	6,595.0	175.4	-495.1	499.8	8.00	8.00	0.00
<b>NIO B MARL</b>									
6,800.0	67.85	269.40	6,599.6	175.3	-506.2	510.9	8.00	8.00	0.00
6,850.0	71.85	269.40	6,616.8	174.8	-553.1	557.8	8.00	8.00	0.00
6,900.0	75.85	269.40	6,630.7	174.3	-601.1	605.8	8.00	8.00	0.00
6,932.6	78.47	269.40	6,638.0	174.0	-633.0	637.6	8.00	8.00	0.00
<b>NIO C CHALK</b>									
6,950.0	79.85	269.40	6,641.3	173.8	-650.0	654.6	8.00	8.00	0.00
7,000.0	83.85	269.40	6,648.3	173.3	-699.5	704.1	8.00	8.00	0.00
7,014.3	85.00	269.40	6,649.7	173.1	-713.7	718.3	8.00	8.00	0.00
<b>Start 75.0 hold at 7014.3 MD - 7" Casing @ 7014.3' MD</b>									
7,050.0	85.00	269.40	6,652.8	172.8	-749.3	753.8	0.00	0.00	0.00
7,089.3	85.00	269.40	6,656.3	172.4	-788.4	792.9	0.00	0.00	0.00
<b>Start Build 8.00</b>									
7,100.0	85.85	269.40	6,657.1	172.2	-799.1	803.6	7.98	7.98	0.00
7,150.0	89.85	269.40	6,659.0	171.7	-849.0	853.5	8.00	8.00	0.00
7,151.8	90.00	269.40	6,659.0	171.7	-850.9	855.3	8.00	8.00	0.00
7,200.0	90.00	269.40	6,659.0	171.2	-899.0	903.5	0.00	0.00	0.00
7,250.0	90.00	269.40	6,659.0	170.7	-949.0	953.4	0.00	0.00	0.00
7,300.0	90.00	269.40	6,659.0	170.1	-999.0	1,003.4	0.00	0.00	0.00
7,350.0	90.00	269.40	6,659.0	169.6	-1,049.0	1,053.4	0.00	0.00	0.00
7,400.0	90.00	269.40	6,659.0	169.1	-1,099.0	1,103.3	0.00	0.00	0.00
7,450.0	90.00	269.40	6,659.0	168.6	-1,149.0	1,153.3	0.00	0.00	0.00
7,500.0	90.00	269.40	6,659.0	168.0	-1,199.0	1,203.3	0.00	0.00	0.00
7,550.0	90.00	269.40	6,659.0	167.5	-1,249.0	1,253.2	0.00	0.00	0.00
7,600.0	90.00	269.40	6,659.0	167.0	-1,299.0	1,303.2	0.00	0.00	0.00
7,650.0	90.00	269.40	6,659.0	166.5	-1,349.0	1,353.1	0.00	0.00	0.00
7,700.0	90.00	269.40	6,659.0	165.9	-1,399.0	1,403.1	0.00	0.00	0.00
7,750.0	90.00	269.40	6,659.0	165.4	-1,449.0	1,453.1	0.00	0.00	0.00
7,800.0	90.00	269.40	6,659.0	164.9	-1,499.0	1,503.0	0.00	0.00	0.00
7,850.0	90.00	269.40	6,659.0	164.4	-1,549.0	1,553.0	0.00	0.00	0.00
7,900.0	90.00	269.40	6,659.0	163.8	-1,599.0	1,603.0	0.00	0.00	0.00
7,950.0	90.00	269.40	6,659.0	163.3	-1,649.0	1,652.9	0.00	0.00	0.00
8,000.0	90.00	269.40	6,659.0	162.8	-1,699.0	1,702.9	0.00	0.00	0.00
8,050.0	90.00	269.40	6,659.0	162.3	-1,749.0	1,752.8	0.00	0.00	0.00
8,100.0	90.00	269.40	6,659.0	161.7	-1,799.0	1,802.8	0.00	0.00	0.00
8,150.0	90.00	269.40	6,659.0	161.2	-1,849.0	1,852.8	0.00	0.00	0.00
8,200.0	90.00	269.40	6,659.0	160.7	-1,899.0	1,902.7	0.00	0.00	0.00
8,250.0	90.00	269.40	6,659.0	160.2	-1,949.0	1,952.7	0.00	0.00	0.00
8,300.0	90.00	269.40	6,659.0	159.6	-1,999.0	2,002.7	0.00	0.00	0.00
8,350.0	90.00	269.40	6,659.0	159.1	-2,049.0	2,052.6	0.00	0.00	0.00
8,400.0	90.00	269.40	6,659.0	158.6	-2,099.0	2,102.6	0.00	0.00	0.00
8,450.0	90.00	269.40	6,659.0	158.1	-2,149.0	2,152.6	0.00	0.00	0.00
8,500.0	90.00	269.40	6,659.0	157.5	-2,199.0	2,202.5	0.00	0.00	0.00
8,550.0	90.00	269.40	6,659.0	157.0	-2,249.0	2,252.5	0.00	0.00	0.00
8,600.0	90.00	269.40	6,659.0	156.5	-2,299.0	2,302.4	0.00	0.00	0.00
8,650.0	90.00	269.40	6,659.0	156.0	-2,349.0	2,352.4	0.00	0.00	0.00
8,700.0	90.00	269.40	6,659.0	155.4	-2,399.0	2,402.4	0.00	0.00	0.00
8,750.0	90.00	269.40	6,659.0	154.9	-2,449.0	2,452.3	0.00	0.00	0.00
8,800.0	90.00	269.40	6,659.0	154.4	-2,499.0	2,502.3	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,850.0	90.00	269.40	6,659.0	153.9	-2,549.0	2,552.3	0.00	0.00	0.00	
8,900.0	90.00	269.40	6,659.0	153.3	-2,599.0	2,602.2	0.00	0.00	0.00	
8,950.0	90.00	269.40	6,659.0	152.8	-2,648.9	2,652.2	0.00	0.00	0.00	
9,000.0	90.00	269.40	6,659.0	152.3	-2,698.9	2,702.1	0.00	0.00	0.00	
9,050.0	90.00	269.40	6,659.0	151.8	-2,748.9	2,752.1	0.00	0.00	0.00	
9,100.0	90.00	269.40	6,659.0	151.2	-2,798.9	2,802.1	0.00	0.00	0.00	
9,150.0	90.00	269.40	6,659.0	150.7	-2,848.9	2,852.0	0.00	0.00	0.00	
9,200.0	90.00	269.40	6,659.0	150.2	-2,898.9	2,902.0	0.00	0.00	0.00	
9,250.0	90.00	269.40	6,659.0	149.7	-2,948.9	2,952.0	0.00	0.00	0.00	
9,300.0	90.00	269.40	6,659.0	149.1	-2,998.9	3,001.9	0.00	0.00	0.00	
9,350.0	90.00	269.40	6,659.0	148.6	-3,048.9	3,051.9	0.00	0.00	0.00	
9,400.0	90.00	269.40	6,659.0	148.1	-3,098.9	3,101.9	0.00	0.00	0.00	
9,450.0	90.00	269.40	6,659.0	147.6	-3,148.9	3,151.8	0.00	0.00	0.00	
9,500.0	90.00	269.40	6,659.0	147.0	-3,198.9	3,201.8	0.00	0.00	0.00	
9,550.0	90.00	269.40	6,659.0	146.5	-3,248.9	3,251.7	0.00	0.00	0.00	
9,600.0	90.00	269.40	6,659.0	146.0	-3,298.9	3,301.7	0.00	0.00	0.00	
9,650.0	90.00	269.40	6,659.0	145.5	-3,348.9	3,351.7	0.00	0.00	0.00	
9,700.0	90.00	269.40	6,659.0	144.9	-3,398.9	3,401.6	0.00	0.00	0.00	
9,750.0	90.00	269.40	6,659.0	144.4	-3,448.9	3,451.6	0.00	0.00	0.00	
9,760.1	90.00	269.40	6,659.0	144.3	-3,459.0	3,461.6	0.00	0.00	0.00	
<b>Wells Ranch USX AA35-14</b>										
9,800.0	90.00	269.40	6,659.0	143.9	-3,498.9	3,501.6	0.00	0.00	0.00	
9,850.0	90.00	269.40	6,659.0	143.4	-3,548.9	3,551.5	0.00	0.00	0.00	
9,900.0	90.00	269.40	6,659.0	142.8	-3,598.9	3,601.5	0.00	0.00	0.00	
9,950.0	90.00	269.40	6,659.0	142.3	-3,648.9	3,651.4	0.00	0.00	0.00	
10,000.0	90.00	269.40	6,659.0	141.8	-3,698.9	3,701.4	0.00	0.00	0.00	
10,050.0	90.00	269.40	6,659.0	141.3	-3,748.9	3,751.4	0.00	0.00	0.00	
10,100.0	90.00	269.40	6,659.0	140.7	-3,798.9	3,801.3	0.00	0.00	0.00	
10,150.0	90.00	269.40	6,659.0	140.2	-3,848.9	3,851.3	0.00	0.00	0.00	
10,200.0	90.00	269.40	6,659.0	139.7	-3,898.9	3,901.3	0.00	0.00	0.00	
10,250.0	90.00	269.40	6,659.0	139.2	-3,948.9	3,951.2	0.00	0.00	0.00	
10,300.0	90.00	269.40	6,659.0	138.6	-3,998.9	4,001.2	0.00	0.00	0.00	
10,350.0	90.00	269.40	6,659.0	138.1	-4,048.9	4,051.1	0.00	0.00	0.00	
10,400.0	90.00	269.40	6,659.0	137.6	-4,098.9	4,101.1	0.00	0.00	0.00	
10,450.0	90.00	269.40	6,659.0	137.1	-4,148.9	4,151.1	0.00	0.00	0.00	
10,500.0	90.00	269.40	6,659.0	136.6	-4,198.9	4,201.0	0.00	0.00	0.00	
10,550.0	90.00	269.40	6,659.0	136.0	-4,248.9	4,251.0	0.00	0.00	0.00	
10,600.0	90.00	269.40	6,659.0	135.5	-4,298.9	4,301.0	0.00	0.00	0.00	
10,650.0	90.00	269.40	6,659.0	135.0	-4,348.9	4,350.9	0.00	0.00	0.00	
10,700.0	90.00	269.40	6,659.0	134.5	-4,398.9	4,400.9	0.00	0.00	0.00	
10,750.0	90.00	269.40	6,659.0	133.9	-4,448.8	4,450.9	0.00	0.00	0.00	
10,800.0	90.00	269.40	6,659.0	133.4	-4,498.8	4,500.8	0.00	0.00	0.00	
10,850.0	90.00	269.40	6,659.0	132.9	-4,548.8	4,550.8	0.00	0.00	0.00	
10,900.0	90.00	269.40	6,659.0	132.4	-4,598.8	4,600.7	0.00	0.00	0.00	
10,950.0	90.00	269.40	6,659.0	131.8	-4,648.8	4,650.7	0.00	0.00	0.00	
11,000.0	90.00	269.40	6,659.0	131.3	-4,698.8	4,700.7	0.00	0.00	0.00	
11,001.7	90.00	269.40	6,659.0	131.3	-4,700.5	4,702.4	0.00	0.00	0.00	
<b>TD at 11001.7 - Wells Ranch 14-35 - Wells Ranch AA35-65-1BHNC BHL 2225'FSL, 750'FWL</b>										



# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	APD - Rev 0		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Wells Ranch AA35-65-1I - plan hits target center - Point	0.00	0.00	6,659.0	131.3	-4,700.5	1,405,631.13	3,303,108.94	40.441750	-104.410980
Wells Ranch USX AA35- - plan misses target center by 1655.1usft at 9760.1usft MD (6659.0 TVD, 144.3 N, -3459.0 E) - Circle (radius 150.0)	0.00	0.00	6,947.0	-1,485.5	-3,441.9	1,404,014.43	3,304,367.58	40.437270	-104.406530
Wells Ranch 14-35 - plan misses target center by 1773.1usft at 11001.7usft MD (6659.0 TVD, 131.3 N, -4700.5 E) - Circle (radius 150.0)	0.00	0.00	7,429.0	-1,465.1	-4,750.5	1,404,034.76	3,303,058.96	40.437370	-104.411230
Wells Ranch 13-36 - plan misses target center by 1469.5usft at 6636.5usft MD (6521.3 TVD, 176.8 N, -363.0 E) - Circle (radius 150.0)	0.00	0.00	7,700.0	-48.6	485.0	1,405,451.26	3,308,294.26	40.441080	-104.392360

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
7,014.3	6,649.7	7" Casing @ 7014.3' MD	7	8-3/4	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,476.5	2,464.0	PIERRE		0.00		
3,608.6	3,593.0	PARKMAN		0.00		
4,319.6	4,304.0	SUSSEX		0.00		
4,911.6	4,896.0	SHANNON		0.00		
5,859.6	5,844.0	TEEPEE BUTTES		0.00		
6,516.2	6,444.0	SHARON SPRINGS		0.00		
6,567.7	6,479.0	NIOBRARA		0.00		
6,567.7	6,479.0	NIO A CHALK		0.00		
6,612.3	6,507.0	NIO A MARL		0.00		
6,710.9	6,561.0	NIO B CHALK		0.00		
6,788.0	6,595.0	NIO B MARL		0.00		
6,932.6	6,638.0	NIO C CHALK		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,500.0	1,500.0	0.0	0.0	KOP - Start Build 2.00	
2,407.9	2,396.8	120.3	-40.1	Start Drop -2.00	
5,951.8	5,936.2	180.0	-60.0	KOP #2 - Start Build 8.00	
7,014.3	6,649.7	173.1	-713.7	Start 75.0 hold at 7014.3 MD	
7,089.3	6,656.3	172.4	-788.4	Start Build 8.00	
11,001.7	6,659.0	131.3	-4,700.5	TD at 11001.7	

# **Northern Region Drilling - Working**

**Wattenberg Field**

**AA (06N-63W)**

**Wells Ranch AA35-65-1BHNC**

**Wellbore #1**

**APD - Rev 0**

## **Anticollision Summary Report**

**16 September, 2013**

**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	APD - Rev 0		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0 usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	9/16/2013		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,001.7	APD - Rev 0 (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
AA (06N-63W)						
Wells Ranch 13-36 - Wellbore #1 - Wellbore #1 - As Drill	1,500.0	1,472.0	487.4	482.5	99.744	CC, ES
Wells Ranch 13-36 - Wellbore #1 - Wellbore #1 - As Drill	6,000.0	5,956.4	592.5	572.6	29.767	SF
Wells Ranch 14-35 - Wellbore #1 - Wellbore #1 - As Drill	11,001.7	6,622.0	1,597.2	1,460.4	11.672	CC, ES, SF
Wells Ranch AA35-63-1AHNA - Original Drilling - APD - R	1,200.0	1,197.0	112.9	107.8	22.106	CC, ES
Wells Ranch AA35-63-1AHNA - Original Drilling - APD - R	11,001.7	10,964.0	1,078.0	820.7	4.189	SF
Wells Ranch AA35-63-1HNC - Original Drilling - APD - R	1,000.0	996.0	153.0	148.8	36.366	CC, ES
Wells Ranch AA35-63-1HNC - Original Drilling - APD - R	11,001.7	11,106.7	1,235.3	976.6	4.775	SF
Wells Ranch AA35-64-1AHNA - Original Drilling - APD - R	1,500.0	1,499.0	40.1	33.6	6.203	CC, ES
Wells Ranch AA35-64-1AHNA - Original Drilling - APD - R	11,001.7	10,892.4	508.5	256.0	2.014	SF
Wells Ranch AA35-64-1BHNC - Original Drilling - APD -	1,500.0	1,498.0	76.5	70.0	11.843	CC, ES
Wells Ranch AA35-64-1BHNC - Original Drilling - APD -	11,001.7	11,020.0	666.9	408.3	2.579	SF
Wells Ranch AA35-65-1AHNA - Original Drilling - APD - R	1,166.3	1,167.3	36.4	31.5	7.335	CC
Wells Ranch AA35-65-1AHNA - Original Drilling - APD - R	11,001.7	10,905.7	204.7	-15.2	0.931	Level 1, ES, SF
Wells Ranch USX AA35-14 - Wellbore #1 - Wellbore #1 -	9,760.1	6,619.0	1,629.9	1,527.6	15.935	CC
Wells Ranch USX AA35-14 - Wellbore #1 - Wellbore #1 -	9,800.0	6,619.0	1,630.4	1,527.0	15.769	ES
Wells Ranch USX AA35-14 - Wellbore #1 - Wellbore #1 -	10,500.0	6,619.0	1,790.0	1,667.1	14.570	SF
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1 -	8,336.3	6,592.2	1,501.8	1,434.6	22.361	CC
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1 -	8,400.0	6,591.8	1,503.1	1,434.2	21.822	ES
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1 -	9,300.0	6,587.1	1,784.4	1,690.8	19.079	SF
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1 -	603.5	532.5	1,558.1	1,556.0	740.387	CC
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1 -	7,014.3	6,576.8	1,579.8	1,546.0	46.647	ES
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1 -	9,300.0	6,585.7	2,791.6	2,698.1	29.846	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Noble Energy Inc

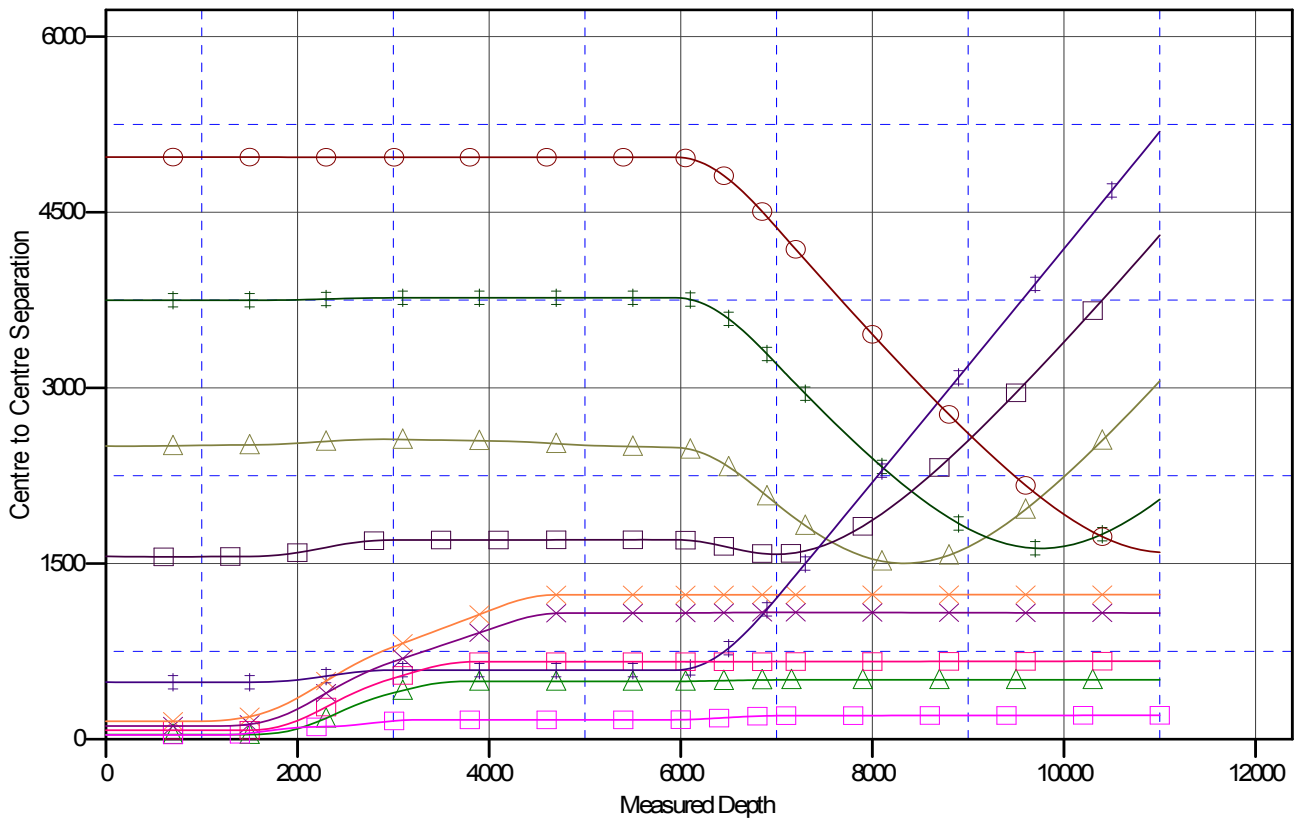
## Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4798.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch AA35-65-1BHNC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.71°

### Ladder Plot



### LEGEND

INC, Original Drilling, APD - Rev0 V0	Wells Ranch USX AA35-16, Wellbore #1, Wellbore #1 - As Drilled V0	Wells Ranch AA35-63-1AHNA, Original Drilling, APD - Rev0 V0
15 Wellbore #1, Wellbore #1 - As Drilled V0	Wells Ranch 13-36, Wellbore #1, Wellbore #1 - As Drilled V0	Wells Ranch AA35-65-1AHNA, Original Drilling, APD - Rev0 V0
14 Wellbore #1, Wellbore #1 - As Drilled V0	Wells Ranch AA35-64-1BHNC, Original Drilling, APD - Rev0 V0	
1AHNA, Original Drilling, APD - Rev0 V0	Wells Ranch 14-35, Wellbore #1, Wellbore #1 - As Drilled V0	

# Noble Energy Inc

## Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-65-1BHNC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4798.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA35-65-1BHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4798.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch AA35-65-1BHNC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.71°

